



**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243**

March 30, 2013

Mr. Jubal Yennie
Director of Schools
e-copy: jubal.yennie@sullivank12.net
East High School
PO BOX 306
Blountville, TN 37617

Subject: **NPDES Permit No. TN0025178
Akard Elementary School
Bristol, Sullivan County, Tennessee**

Dear Mr. Yennie:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed NPDES Permit. The continuance and/or reissuance of this NPDES Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the technical secretary of the Water Resources Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

If you have questions, please contact the Johnson City Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Gary Davis at (615) 532-0649 or by E-mail at Gary.Davis@tn.gov.

Sincerely,

Vojin Janjić
Manager, Permit Section

Enclosure

cc: Permit Section File
Johnson City Environmental Field Office (Robert.Tipton@tn.gov)



No. TN0025178

Authorization to discharge under the
National Pollutant Discharge Elimination System

Issued By

**Tennessee Department of Environment and Conservation
Division of Water Resources
401 Church Street
6th Floor, L & C Annex
Nashville, Tennessee 37243-1534**

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Discharger: **Akard Elementary School**

is authorized to discharge: treated domestic wastewater from Outfall 001

from a facility located: Bristol, Sullivan County, Tennessee

to receiving waters named: unnamed tributary at mile 0.7 to Back Creek at mile 4.0

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on: **May 1, 2013**

This permit shall expire on: **December 31, 2017**

Issuance date: **April 1, 2013**

A handwritten signature in blue ink, appearing to read "S. Dudley", is written over a horizontal line.

for Sandra K. Dudley, Ph.D., P.E.
Director, Division of Water Resources

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PART 1

A. EFFLUENT LIMITATION AND MONITORING REQUIREMENTS

Discharge 001 consists of domestic wastewater from a treatment facility with a design capacity of 0.006 MGD. Discharge 001 shall be limited and monitored by the permittee as specified below.

Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Flow	Report	-	Mgal/d	Instantaneous	Five Per Week	Monthly Average
Flow	Report	-	Mgal/d	Instantaneous	Five Per Week	Daily Maximum
BOD, 5-day, 20 C	<=	30	mg/L	Grab	Twice Per Month	Monthly Average
BOD, 5-day, 20 C	<=	45	mg/L	Grab	Twice Per Month	Daily Maximum
Total Suspended Solids (TSS)	<=	30	mg/L	Grab	Twice Per Month	Monthly Average
Total Suspended Solids (TSS)	<=	45	mg/L	Grab	Twice Per Month	Daily Maximum
Chlorine, total residual (TRC)	<=	0.15	mg/L	Grab	Five Per Week	Instantaneous Maximum
<i>E. coli</i>	<=	126	CFU/100mL	Grab	Monthly	Monthly Geometric Mean
<i>E. coli</i>	<=	941	CFU/100mL	Grab	Monthly	Daily Maximum
Oxygen, dissolved (DO)	>=	1.0	mg/L	Grab	Five Per Week	Instantaneous Minimum
Settleable Solids	<=	1	mL/L	Grab	Two Per Week	Daily Maximum
pH	>=	6.5	SU	Grab	Two Per Week	Daily Minimum
pH	<=	9.0	SU	Grab	Two Per Week	Daily Maximum

Note - pH and TRC must be measured within 15 minutes from sample collection. The above TRC limit (0.15 mg/L) must be achieved within one year from the permit's effective date. The TRC limit of 0.5 mg/L (daily maximum) applies until the dechlorination system is functional to achieve the 0.15 mg/L TRC limit.

The wastewater discharge must be disinfected to the extent that viable coliform organisms are effectively eliminated. The concentration of the *E. coli* group after disinfection shall not exceed 126 cfu per 100 ml as the geometric mean calculated on the actual number of samples collected and tested for *E. coli* within the required reporting period. The permittee may collect more samples than specified as the monitoring frequency. Samples may not be collected at intervals of less than 12 hours. For the purpose of determining the geometric mean, individual samples having an *E. coli* group concentration of less than one (1) per 100 ml shall be considered as having a concentration of one (1) per 100 ml. In addition, the concentration of the *E. coli* group in any individual sample shall not exceed a specified maximum amount. A maximum daily limit of 487 colonies per 100 ml applies to lakes and exceptional Tennessee waters. A maximum daily limit of 941 colonies per 100 ml applies to all other recreational waters.

The acceptable methods for analysis of TRC are any methods specified in Title 40 CFR, Part 136 as amended. The method detection level (MDL) for TRC shall not exceed 0.05 mg/l unless the permittee demonstrates that its MDL is higher. The permittee shall retain the documentation that justifies the higher MDL and have it available for review upon request.

There shall be no distinctly visible floating scum, oil or other matter contained in the wastewater discharge.

The wastewater discharge must result in no other materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters.

The wastewater discharge must not cause an objectionable color contrast in the receiving stream.

B. MONITORING PROCEDURES

1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

nearest accessible point after final treatment but prior to actual discharge to or mixing with the receiving waters.

2. Test Procedures

- a. Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act, as amended, under which such procedures may be required.
- b. Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136, as amended, promulgated pursuant to Section 304 (h) of the Act.

3. Sampling Frequency

- a. Where the permit requires sampling and monitoring of a particular effluent characteristic(s) at a frequency of less than once per day or daily, the permittee is precluded from marking the "No Discharge" block on the Discharge Monitoring Report if there has been any discharge from that particular outfall during the period which coincides with the required monitoring frequency; i.e. if the required monitoring frequency is once per month or 1/month, the monitoring period is one month, and if the discharge occurs during only one day in that period then the permittee must sample on that day and report the results of analyses accordingly.

4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The exact person(s) collecting samples;
- c. The dates and times the analyses were performed;
- d. The person(s) or laboratory who performed the analyses;

- e. The analytical techniques or methods used, and;
- f. The results of all required analyses.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Division of Water Resources.

C. DEFINITIONS

The "instantaneous concentration" is a limitation on the concentration, in milligrams per liter, of any pollutant contained in the wastewater discharge determined from a grab sample taken of the discharge at any point in time.

The "daily maximum concentration" is a limitation on the average concentration, in milligrams per liter, of the discharge during any calendar day.

The "monthly average concentration" is the arithmetic mean of all samples collected in a one-month period. If only one sample is required per month, the permittee is required to report compliance against the monthly average limit other than *E coli*.

For the purpose of this permit a "calendar day" is defined as any 24-hour period.

D. REPORTING

1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly using Monthly Operation Report Forms (MOR) supplied by the Division of Water Resources. Submittals shall be postmarked no later than 15 days after the completion of the reporting period. A copy should be retained for the permittee's files. Monthly Operation Reports and any communication regarding compliance with the conditions of this permit must be sent to:

**Attention: Division of Water Resources
Johnson City Environmental Field Office
2305 Silverdale Road
Johnson City, TN 37601**

The first MOR is due on the 15th of the month following permit effectiveness.

Monthly Operation Report must be signed and certified by a responsible corporate officer, as defined at 40 CFR 122.22, or a general partner or proprietor, or a principal municipal executive officer or ranking elected officer, or a duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monthly Operation Report Form (MOR). Such increased frequency shall also be indicated. The Permittee is also required to perform and report influent and

operation tests in accordance with the schedule listed on the Monthly Operation Report/Schedule for Analysis for Package Sewage Treatment Facilities or as developed by the design engineer.

3. Falsifying Reports

Knowingly making any false statement on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

E. SCHEDULE OF COMPLIANCE

Full operational level shall be attained from the effective date of this permit.

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

The permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Resources (the "Director") no later than 180 days prior to the expiration date.

2. Right of Entry

The permittee shall allow the Director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;
- b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and
- c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Resources. As required by the Federal Act, effluent data shall not be considered confidential.

4. Proper Operation and Maintenance

- a. The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a

permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

- b. Dilution water shall not be added to comply with effluent requirements to achieve BCT, BPT, BAT and/or other technology based effluent limitations such as those in State of Tennessee Rule 1200-4-5-.03.

5. Treatment Facility Failure (Industrial Sources)

The permittee, in order to maintain compliance with this permit, shall control production, all discharges or both, upon reduction, loss, or failure of the treatment facility, until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

8. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

2. Permit Modification, Revocation, or Termination

- a. This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR 122.62 and 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended.

- b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- c. If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the Director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit on the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.
- d. The filing of a request by the permittee for a modification, revocation, reissuance, termination, or notification of planned changes or anticipated noncompliance does not halt any permit condition.

3. Change of Ownership

This permit may be transferred to another party (provided there are neither modifications to the facility or its operations, nor any other changes which might affect the permit limits and conditions contained in the permit) by the permittee if:

- a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;
- b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and
- c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

Pursuant to the requirements of 40 CFR 122.61, concerning transfer of ownership, the permittee must provide the following information to the division in their formal notice of intent to transfer ownership: 1) the NPDES permit number of the subject permit; 2) the effective date of the proposed transfer; 3) the name and address of the transferor; 4) the name and address of the transferee; 5) the names of the responsible parties for both the transferor and transferee; 6) a statement that the transferee assumes responsibility for the subject NPDES permit; 7) a statement that the transferor relinquishes responsibility for the subject NPDES permit; 8) the signatures of the responsible parties for both the transferor and transferee pursuant to the requirements of 40 CFR 122.22(a), "Signatories to permit applications"; and, 9) a statement regarding any proposed modifications to the facility, its operations, or any other changes which might affect the permit limits and conditions contained in the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable State and Federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours from the time the permittee becomes aware of the circumstances. (The Environmental Field Office should be contacted for names and phone numbers of environmental response team.)

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless the Director on a case-by-case basis waives this requirement. The permittee shall provide the Director with the following information:

- i. A description of the discharge and cause of noncompliance;
- ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- iii. The steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Monthly operation report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

3. Overflow

- a. "**Overflow**" means the discharge **to land or water** of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls
- b. Overflows are prohibited.
- c. The permittee shall operate the collection system so as to avoid overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic overflows (greater than 5 events per year) or would otherwise overload any portion of the system.
- d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in

accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic bypass point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the flow measurement industry and reported in an attachment to a Monthly Operating Report submitted to the local TDEC Environmental Field Office. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

- e. In the event that more than 5 overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Resources EFO staff to petition for a waiver based on mitigating evidence.

4. Upset

- a. "**Upset**" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
 - iii. The permittee submitted information required under "Reporting of Noncompliance" within 24 hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and
 - iv. The permittee complied with any remedial measures required under "Adverse Impact."

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. Bypass

- a. **"Bypass"** is the intentional diversion of wastewater away from any portion of a treatment facility. **"Severe property damage"** means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- b. Bypasses are prohibited unless all of the following three (3) conditions are met:
 - i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii. There are not feasible alternatives to bypass, such as the construction and use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment down-time or preventative maintenance;
 - iii. The permittee submits notice of an unanticipated bypass to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the Director, if possible, at least ten (10) days before the date of the bypass.
- c. Bypasses not exceeding permit limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 6.b.iii, above.

7. Washout

- a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.
- b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on the Monthly operation report. Each day of a washout is a separate violation.

D. LIABILITIES

1. Civil and Criminal Liability

Except as provided in permit conditions or **"Bypass," "Overflow," "Upset," "Diversion,"** and **"Treatment Facility Failures,"** nothing in this permit shall be construed to relieve the permittee from civil or criminal

penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or the Federal Water Pollution Control Act, as amended.

PART III OTHER REQUIREMENTS

A. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a certified operator in accordance with the Water Environmental Health Act of 1984.

B. PLACEMENT OF SIGNS

The permittee shall place and maintain a sign at each outfall. The sign(s) should be clearly visible to the public from the bank and the receiving stream. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice to the public as to the nature of the discharge and in the case of the permitted outfalls, that the discharge is regulated by the Tennessee Department of Environment and Conservation, Division of Water Resources. The following is given as an example of the minimal amount of information that must be included on the sign:

NPDES permitted domestic outfall:

<p style="text-align: center;"> TREATED DOMESTIC WASTEWATER (PERMITTEE'S NAME) (PERMITTEE'S PHONE NUMBER) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT # TN0025178 TENNESSEE DIVISION OF WATER RESOURCES Johnson City Environmental Field Office PHONE NUMBER : 1-888-891-8332 </p>
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No later than sixty (60) days from the effective date of the permit, the permittee shall have the above sign(s) on display in the location specified.

C. ADDITION OF WASTE LOADS

The permittee may not add wasteloads to the existing treatment system without the knowledge and approval of the division.

D. SLUDGE MANAGEMENT PRACTICES

The permittee must comply with the provisions of 40 CFR Part 503. If the sludge is transported to another POTW for disposal, the permittee shall note on the monthly operation report the amount of sludge wasted in gallons, % solids of sludge wasted and the name of the facility to which the sludge was taken.

The proper operation of this treatment system depends, largely, on the efficient use of the septic tank. The solids that accumulate in the tank shall be removed at a frequency that is sufficient to insure that the treatment plant will comply with the discharge requirements of this permit.

E. ANTIDegradation

Pursuant to the Rules of the Tennessee Department of Environment and Conservation, Chapter 1200-4-3-.06, titled "Tennessee Antidegradation Statement," which prohibits the degradation of high quality surface waters and the increased discharges of substances that cause or contribute to impairment, the permittee shall further be required, pursuant to the terms and conditions of this permit, to comply with the effluent limitations and schedules of compliance required to implement applicable water quality standards, to comply with a State Water Quality Plan or other state or federal laws or regulations, or where practicable, to comply with a standard permitting no discharge of pollutants.

F. COMPLIANCE SCHEDULE

Within one year of the permit's effective date, the permittee shall install equipment as necessary to comply with the Total Chlorine Residual limit of 0.15 mg/l as a daily maximum. In the meanwhile, the TRC limit from the current permit 0.5 mg/L as a daily maximum applies.

RATIONALE**NPDES PERMIT No. TN0025178****Permit Writer: Gary Davis****I. DISCHARGER**

NAME: Akard Elementary School
 REPRESENTATIVE: Mr. Jubal Yennie
 LOCATION: Bristol, COUNTY: Sullivan, PHONE NUMBER: 423- 354-1000
 WASTEWATER:
 Discharge number: 001 type: Domestic
 WATERSHED: Holston-South Fork (U/S of Watauga) HUC: 6010102
 Average design flow: 0.006 MGD
 PRESENT TREATMENT: Extended aeration
 STATUS: Reissuance

II. RECEIVING WATERS

RECEIVING STREAM: unnamed tributary at mile 0.7 (current permit indicated the river mile to be 0.1) to Back Creek at mile 4.0
 CLASSIFICATION: Designated uses: fish and aquatic life, recreation, irrigation, livestock watering and wildlife.
 LOW FLOWS: 7Q10 = 0.04 MGD for unnamed tributary and 0.25 MGD for Back Creek
 WATER QUALITY STATUS: The unnamed tributary has not been assessed and is assumed to achieve its designated usage. The division has determined that Back Creek is partially supporting its designated uses and needs additional control regarding its recreation and fish/aquatic life usages. This Rationale discusses water quality impacts in Section VI.

III. PREVIOUS PERMIT

ISSUANCE: 29-FEB-08
 EXPIRATION: 30-NOV-12

PARAMETERS	MONTHLY AVERAGE CONCENTRATION (MG/L)	MAXIMUM CONCENTRATION (MG/L)
BOD ₅	30	45
Total Suspended Solids	30	45
Dissolved Oxygen	1.0 (daily minimum)	
Total Chlorine Residual		0.5 (daily maximum)
<i>E. coli</i> (cfu/100 ml)	126	941
Settleable Solids (ml/l)		1.0 (daily maximum)
pH (standard units)	6.5 - 9.0	
Flow (MGD):		
Effluent	Report	Report

IV. PROPOSED EFFLUENT LIMITS AND RATIONALE

The facility was stopped being used as a school in the summer of 2011, and since then the flow has been due to rainwater getting into the treatment system, e.g., via building downspouts. The permittee is trying to locate and redirect downspouts that are still connected to the wastewater treatment system. The permittee plans to no longer use the facility as a school, and instead use it as a warehouse with only domestic wastewater requiring treatment. As such the treatment system should have much lower hydraulic and organic loading rates, with resulting improved performance expected. Based on the permittee's permit renewal application and MOR evaluations it was evident that some problems achieving the TSS, *E. coli* and TRC current discharge permit limits have occurred. Therefore, additional operational attention may be required for achieving the new permit's requirements. Based on the upgraded low-flow receiving stream estimates, the TRC discharge limit has been reduced from 0.5 to 0.15 mg/L. The new permit provides a one year period to installing new/additional dechlorination equipment for achieving the more stringent TRC limit. The lower organic loading should provide for improved *E. coli* control. As discussed in Section VI, the receiving stream is not fully supporting due to instream *E. coli*, and effective treated effluent disinfection is required.

B. TEST METHOD FOR *E. COLI*

Wastewater disinfection is required to protect the receiving stream from pathogenic microorganisms. *E. coli* are indicator organisms used as a measure the receiving stream's bacteriological health and disinfection system's performance. Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136, as amended, promulgated pursuant to Section 304 (h) of the Act.

C. CHLORINATION

The total residual chlorine (TRC) limit is derived using the mass balance formula and the EPA instream protection value of 0.019 mg/l for fish and aquatic life. Applying this formula yields the following calculation:

$$\frac{0.019 (Q_d + Q_s)}{Q_d} = \text{Limit (mg/l)} = \frac{0.019(.006 + 0.04)}{0.006} = 0.15 \text{ mg/l}$$

where:

0.019	=	instream protection value for unnamed tributary (acute)
0.006	=	Q _d , design flow of STP (MGD)
0.04	=	Q _s , unnamed tributary to Back Creek 7Q10 flow (MGD)

The new permit's TRC limit is 0.15 mg/L. The above TRC limit (0.15 mg/L) must be achieved within one year from the permit's effective date. The TRC limit of 0.5 mg/L from the permittee current permit applies until the dechlorination system is functional for achieving the 0.15 mg/L TRC limit.

V. OTHER REQUIREMENTS & CONDITIONS

A. Certified Wastewater Treatment Operator

The waste treatment facilities shall be operated under the supervision of a certified wastewater treatment operator in accordance with the Water Environmental Health Act of 1984

B. The permittee is required to install a sign notifying the public of its permitted discharge point.

C. PERMIT TERM

This permit is will be reissued to expire in 2017 in order to coordinate its reissuance with other permits located within the Holston-South Fork (U/S of Watauga) Watershed.

VI ANTIDegradation Statement/Water Quality Status

The Tennessee Department of Environment and Conservation Rules, Chapter 1200-4-3-.06 presents Tennessee's Antidegradation Statement. It is the purpose of Tennessee's standards to fully protect existing uses of all surface waters as established under the Act.

Stream determinations for this permit action are associated with the waterbody segment identified by the division as segment ID# TN06010102042_0210 (unnamed tributary) and TN06010102042_0200 (Back Creek). The division has made a water quality assessment of the receiving waters associated with the subject discharge(s) and has found the receiving stream to be neither an exceptional nor outstanding national resource

Back Creek's livestock watering/wildlife and irrigation usages are fully supporting. However, its recreational use is not fully supporting due to *E. coli*. Back Creek's fish and aquatic life usage needs additional controls due to nitrite/nitrate, physical habitat alternations and sedimentation/siltation. As shown below, several EPA approved TMDLs have been developed for the receiving stream, and as applicable must be considered during the permit renewal process:

<u>TMDL Parameter(s)</u>	<u>Date EPA Approved</u>
Siltation and Habitat Alternation	August 16, 2006
<i>E. coli</i>	September 25, 2006
Chlordane and PCBs (a)	June 26, 2007

(a) For the downstream Boone Reservoir.

The division does not consider the permittee's discharge to have adverse impacts relative to the above TMDLs (siltation and habitat alternation, and Chlordane and PCBs). However, the permittee must focus on consistently achieving its *E.coli* discharge limits. The anticipated reduction in hydraulic and organic loading rates, further identification of stormwater sources and removal from the treatment facility, should result in major improvements in the permittee's disinfection system's performance and decreased nitrite/nitrate discharges.

VII. COMPLIANCE SCHEDULE SUMMARY

<u>Section</u>	<u>Description</u>
I. D 1	MOR Reports, monthly
III. B	Placement of Sign(s), within 60 days from the effective date of this permit
III. D	Sludge management practices, monthly